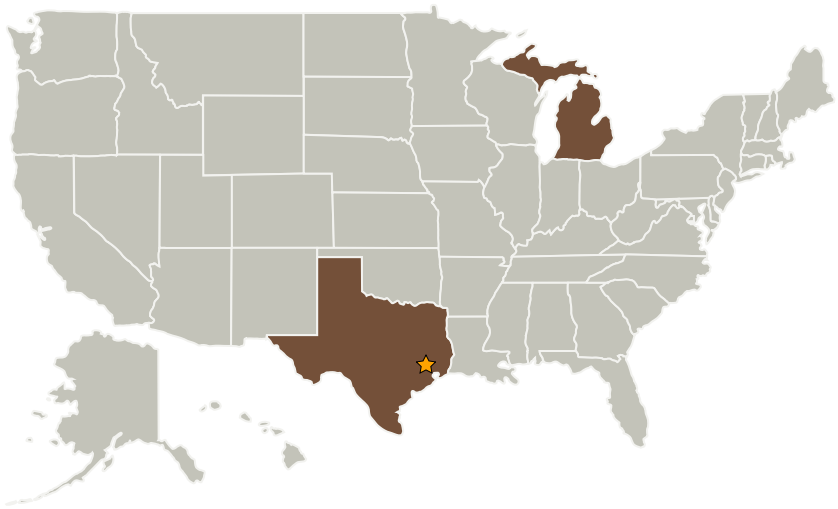
# Improved High-Rejection Filters and MEMS-Enabled Smart Reconfigurable Antennas, Phase I

Completed Technology Project (2008 - 2009)

## Project Introduction

Proposed work envisions development of high-rejection filters and smart reconfigurable antennas using MEMS switches. Adaptive feature of the proposed antenna provides higher S/N ratio and extends range for surface-to-surface communications. Tunable high-rejection filters lend themselves easily to software defined radios.

## Primary U.S. Work Locations and Key Partners



| Organizations Performing Work | Role | Type | Location |
|---|---|---|---|
| ★Johnson Space Center(JSC) | Lead Organization | NASA Center | Houston, Texas |
| Virtual EM Inc. | Supporting Organization | Industry | Ann Arbor, Michigan |

| Primary U.S. Work Locations | |
|---|---|
| Michigan | Texas |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## Table of Contents



## Organizational Responsibility

**Responsible Mission Directorate:**

Space Technology Mission Directorate (STMD)

**Lead Center / Facility:**

Johnson Space Center (JSC)

**Responsible Program:**

Small Business Innovation Research/Small Business Tech Transfer

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## Project Management

**Program Director:**

Jason L Kessler

**Program Manager:**

Carlos Torrez

**Principal Investigator:**

Tayfun Ozdemir

## Technology Areas

**Primary:**

- TX05 Communications, Navigation, and Orbital Debris Tracking and Characterization Systems
  - TX05.2 Radio Frequency
    - TX05.2.6 Innovative Antennas